



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/604,979	08/29/2003	Hung-En Tai	LKSP0019USA	1978
27765	7590	09/03/2004	EXAMINER	
NAIPO (NORTH AMERICA INTERNATIONAL PATENT OFFICE) P.O. BOX 506 MERRIFIELD, VA 22116				NGHIEM, MICHAEL P
ART UNIT		PAPER NUMBER		
		2863		

DATE MAILED: 09/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	10/604,979	TAI ET AL.
	<b>Examiner</b>	<b>Art Unit</b>
	Michael P Nghiem	2863

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on \_\_\_\_.  
 2a) This action is FINAL.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-16 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_ is/are allowed.  
 6) Claim(s) 1-5 is/are rejected.  
 7) Claim(s) 6-16 is/are objected to.  
 8) Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. ____ .
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date ____ .	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: ____ .

## DETAILED ACTION

### *Specification*

1. The disclosure is objected to because of the following informalities:
  - “itemsupon” (paragraph 0006, line 4) should be -- items upon --.
  - “onthe” (paragraph 0006, line 6) should be -- on the --.
  - “stepmay” (paragraph 0008, line 5) should be -- items upon --.

Appropriate correction is required.

2. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: the limitation of claims 1 and 6, “... classifying the plurality of product lots into at least two first groups according to their test parameters of the representative final test item, **if the representative final test item is correlated to the packaging process step ...**” is not supported by Figs. 2 and 4. It appears that the classifying step is performed regardless of whether the representative final test item is correlated to the packaging process step (step 204) or not (step 401).

### *Claim Objections*

3. Claims 1 and 4-6 are objected to because of the following informalities:
  - claim 1, “probabilityof” (lines 31-32) should be – probability of --.

- claim 4, "of the" (line 2) should be – of the --.
- claim 4, "... wherein the killed final test item is the final test item **in which the average of the failure rate of the plurality of lots of wafers is the highest one ...**" should be -- wherein the killed final test item is the final test item **having the highest average failure rate when a plurality of lots of products are tested ...**".
- claim 5, "probability of" (line 4) should be – probability of --.
- claim 6, "searching for" (line 16) should be – searching for --.
- claim 6, "is an" (line 26) should be – is an --.

Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-5 are rejected under 35 U.S.C. 102(e) as being anticipated by Tai et al. (US 2004/0124830).

Regarding claim 1, Tai et al. discloses a method (Fig. 3) for analyzing final test parameters (inspection parameters, Fig. 3), the method being utilized for analyzing a plurality of product lots (lots, Fig. 3), each of the plurality product lots having a lot number (lot number, Fig. 3), the plurality of product lots being fabricated through a plurality of equipment (equipment, Fig. 3), a wafer (inspected layer, Fig. 3) in each product lot being tested according to a plurality of final test items to generate a plurality of final test parameters, the final test items, the final test parameters, and a packaging process step (process step, Fig. 3) correlated to the final test items being stored in a database (database, Fig. 3), the method comprising:

- retrieving the final test parameters of the plurality of product lots by searching the database (301);
- comparing the final test parameters to select a representative final test parameter and a corresponding representative final test item (402-404);
- determining if the representative final test item is correlated to the packaging process step (306);
- classifying the plurality of product lots into at least two first groups according to their test parameters of the representative final test item (303-305), the representative final test item is correlated to the packaging process step (306), the first product groups comprising a first qualified group (Group A) and a first failed group (Group B);
- searching for the equipment through which the first qualified group had passed in the packaging process step (310);

- searching for the equipment through which the first failed group had passed in the packaging process step (309);
- determining the equipment having a probability of having processed the first failed group greater than a probability of having processed the first qualified group (311).

Regarding claim 2, Tai et al. discloses that the representative final test item is a killed final test item (item with optimum kill ratio, paragraph 0016).

Regarding claim 3, Tai et al. discloses the final test item having the highest failure rate (there is deemed to exist an item with highest kill ratio).

Regarding claim 4, Tai et al. discloses the final test item having the highest average failure rate when a plurality of lots of products are tested (there is deemed to exist an item having the highest average kill ratio among the lots inspected).

Regarding claim 5, Tai et al. discloses a commonality analysis means is utilized to determine the equipment having a probability of having processed the first failed group greater than a probability of having processed the first qualified group (311).

***Allowable Subject Matter***

5. Claims 6-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Reasons For Allowance***

6. The method as claimed wherein classifying the plurality of product lots into at least two second groups according to their test parameters of the representative final test item, the second product groups comprising a second qualified group and a second failed group (claim 6) is not disclosed, suggested, or made obvious by the prior art of record.

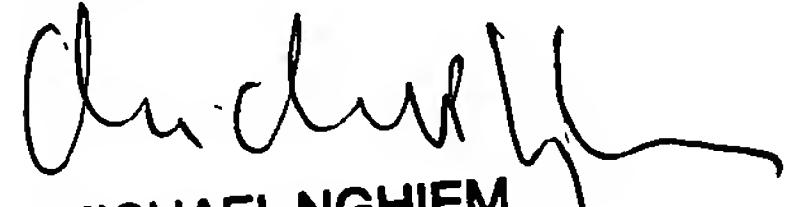
***Contact Information***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Nghiem whose telephone number is (571) 272-2277. The examiner can normally be reached on M-H from 6:30AM – 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached at (571) 272-2269. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306.

Art Unit: 2863

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



MICHAEL NGHIEM  
PRIMARY EXAMINER

Michael Nghiem

September 2, 2004